October 9, 2001

Vince Monza
Fleetwood Motor Homes of Indiana. #44
P.O.Box 31
Decatur, IN 46733

Re: 001-12077
Significant Source Modification to:
Part 70 permit No.: T001-7465-00025

Dear Vince Monza:

Fleetwood Motor Homes of Indiana. #44 was issued Part 70 operating permit T001-7465-00025 on December 17, 1998 for motor home manufacturing plant. An application to modify the source was received on March 23, 2000. Pursuant to 326 IAC 2-7-10.5 the BACT limit in the section D.1 was modified.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

The proposed operating conditions applicable to these emission units are attached to this Source Modification approval. These proposed operating conditions shall be incorporated into the Part 70 operating permit as an administrative amendment in accordance with 326 IAC 2-7-10.5(l)(1) and 326 IAC 2-7-11.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter call (800) 451-6027, press 0 and ask for Gurinder Saini or extension 3-0203, or dial (317) 233-0203.

Sincerely,

Original signed by

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments
GS
cc: File - Adams County
U.S. EPA, Region V
Adams County Health Department
Air Compliance Section Inspector- Jim Thorpe
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the
Technical Support Document for a Part 70 Operating Permit Significant Source Modification

Source Name:	**Fleetwood Motor Homes of Indiana, #44**
Source Location:	**1031 U.S. 224 East, Decatur, IN 46733**
County:	**Adams**
SIC Code:	**3716**
Operation Permit No.:	**T001-7465-00025**
Operation Permit Issuance Date:	**December 17, 1998**
Significant Source Modification No.:	**001-12077-00025**
Permit Reviewer:	**Gurinder Saini**

On June 9, 2001, the Office of Air Quality (OAQ) had a notice published in the Decatur Daily, Decatur, Indiana, stating that Fleetwood Motor Homes of Indiana #44 had applied for a Significant Source Modification under Part 70 Operating Permit to modify the Best Available Control Technology condition. The notice also stated that OAQ proposed to issue a modification for this motor home manufacturing operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments.

Upon further review, the OAQ has decided to make the following revisions to the permit condition (bolded language has been added, the language with a line through it has been deleted):

1. Condition D.1.1 of the permit is revised to correctly reflect the averaging period for VOC emission limit as follows:

D.1.1 Volatile Organic Compounds (VOC) BACT Limits [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6, the graphics stripping and logo painting operation, the adhesive application and finish coating operation and the front cap, rear cap and skirt painting operation shall reduce VOC emissions using Best Available Control Technology (BACT). The BACT conditions for this facility shall be as follows:

(1) The VOC usage per motor home shall be limited to dependent upon size of motor home being produced as following:

Motor home type	Motor home length (feet)	pounds of VOC per motor home (~~daily~~ **Monthly** average)
Small	30	73
Large	45	111.5

(2) Implementation of high transfer efficiency spray technologies (use of air atomization spray application).
(3) Utilization of low VOC coatings
(4) Implementation of pollution prevention techniques, including but not limited to storing solvent and solvent soaked rags in closed containers.

2. Condition D.1.10 of the permit is revised to correct references to the conditions in the compliance determination and monitoring requirements, as follows:

D.1.10 Record Keeping Requirements

(a) To document compliance with Conditions C.1, D.1.1 and D.1.2, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Conditions C.1, D.1.1 and D.1.2.

(1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;

(2) A log of the dates of use;

(3) The cleanup solvent usage for each month;

(4) The total VOC usage for each month; and

(5) The weight of VOCs emitted for each compliance period.

(b) To document compliance with Condition D.1.6**, D.1.7** and D.1.~~7~~**9**, the Permittee shall maintain a log of daily overspray observations, daily and weekly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(1) One (1) motor home painting operation, with spray/curing booths identified as 2A, 2B, 2C, 2D, 3B, 6A, 6B, 7A and 7B, with an average capacity of 3 motor homes per hour, using dry filters to control particulate matter, and exhausting to stacks 2A, 2B, 2C, 2D, 3B, 6A, 6B, 7A and 7B respectively.

(2) One (1) adhesive application operation, identified as spray booth 4A, utilizing air atomization, with an average capacity of 200 lbs per hour per hour, using dry filters as control, and exhausting to stack 4A.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Volatile Organic Compounds (VOC) BACT Limits [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6, the graphics stripping and logo painting operation, the adhesive application and finish coating operation and the front cap, rear cap and skirt painting operation shall reduce VOC emissions using Best Available Control Technology (BACT). The BACT conditions for this facility shall be as follows:

(1) The VOC usage per motor home shall be limited to dependent upon size of motor home being produced as following:

Motor home type	Motor home length (feet)	pounds of VOC per motor home (Monthly average)
Small	30	73
Large	45	111.5

(2) Implementation of high transfer efficiency spray technologies (use of air atomization spray application).
(3) Utilization of low VOC coatings
(4) Implementation of pollution prevention techniques, including but not limited to storing solvent and solvent soaked rags in closed containers.

D.1.2 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

Pursuant to CP 01-11-93-0137, issued on December 1, 1989, this facility shall use less than 250 tons of VOC, including coatings, dilution solvents, and cleaning solvents, per 12 consecutive month period. This usage limit is required to limit the potential to emit of VOC to less than 250 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

D.1.3 Particulate Matter (PM) [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2, the PM from the three (3) spray booth operations (graphics striping and logo painting, cabinet shop adhesive and finish coating and front cap, rear cap and skirt painting) shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and any control devices.

Compliance Determination Requirements

D.1.5 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the VOC limit specified in Condition D.1.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.1.6 Volatile Organic Compounds (VOC)

Compliance with the VOC content and usage limitations contained in Conditions C.1, D.1.1 and D.1.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAM, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.1.7 VOC Emissions

Compliance with Condition C.1, D.1.1 and D.1.2 shall be demonstrated at the end of each month based on the total volatile organic compound usage for the most recent month in reference to Condition D.1.1 and the most recent 12 months in reference to Condition C.1

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.8 Particulate Matter (PM)

Pursuant to CP 01-11-93-0137, issued on December 1, 1989, the dry filters for PM control shall be in operation at all times when the three (3) spray booth operations (graphics striping and logo painting, cabinet shop adhesive and finish coating and front cap, rear cap and skirt painting) are in operation.

D.1.9 Monitoring

(a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, daily observations shall be made of the overspray from the surface coating booth stack while one or more of the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

(b) Weekly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C -

Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

(c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.10 Record Keeping Requirements

(a) To document compliance with Conditions C.1, D.1.1 and D.1.2, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Conditions C.1, D.1.1 and D.1.2.

(1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;

(2) A log of the dates of use;

(3) The cleanup solvent usage for each month;

(4) The total VOC usage for each month; and

(5) The weight of VOCs emitted for each compliance period.

(b) To document compliance with Condition D.1.6, D.1.7 and D.1.9, the Permittee shall maintain a log of daily overspray observations, daily and weekly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.11 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions C.1, D.1.1 and D.1.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Significant Source Modification.

Source Background and Description

Source Name:	**Fleetwood Motor Homes of Indiana, #44**
Source Location:	**1031 U.S. 224 East, Decatur, IN 46733**
County:	**Adams**
SIC Code:	**3716**
Operation Permit No.:	**T001-7465-00025**
Operation Permit Issuance Date:	**December 17, 1998**
Significant Source Modification No.:	**001-12077-00025**
Permit Reviewer:	**Gurinder Saini**

The Office of Air Quality (OAQ) has reviewed a modification application from Fleetwood Motor Homes of Indiana, #44 relating to the VOC application limit per motor home and a new BACT.

History

On March 23, 2000, Fleetwood Motor Homes of Indiana, #44 submitted a letter to the OAQ requesting to modify VOC usage at their surface coating lines in their existing plant. Fleetwood Motor Homes of Indiana, #44 was issued a Part 70 permit on December 17, 1998. This permit contained a BACT which was based on CP 01-11-93-0137, issued on December 1, 1989. The BACT consisted of following conditions:

1. VOC emissions are limited to a daily average of 73 pounds per motor home; and
2. Use of air atomization spray application.

In the letter of March 23, 2000, the Permittee explained that at the time the BACT was submitted and approved in 1989, they were manufacturing motor homes with a length of 30 feet. Over the years, due to a changing market demand, they have shifted to manufacturing longer motor homes. Currently they are producing motor homes with a nominal length of 45 feet. The Permittee has also stated that, there has been approximately 52.8% increase in the surface area of motor homes which would require additional coating material. Based on this Permittee has requested for dual VOC usage limit. As there was a request to increase VOC usage, the Permittee was requested to submit a revised BACT analysis. This analysis was submitted to the OAQ by the Permittee on September 28, 2000.

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and

additional information submitted by the applicant.

A letter for the purposes of this review was received on March 23, 2000, Additional information was received on September 28, 2000.

Emission Calculations

Permittee has submitted detailed surface area calculation along with the letter. The calculation showing ratio of surface areas for motor homes of 45 feet and 30 feet lengths is attached as appendix A.

Based on these calculations, following usage determination is made:

Motor home length	Surface Area
45 feet	1998 square feet
30 feet	1308 square feet

Ratio of surface areas for 45 feet / 30 feet lengths = 1.528
VOC usage per motor home of 30 feet length = 73 pounds
VOC usage per motor home of 45 feet length = 111.5 pounds
VOC usage increase = 111.5-73 = 38.5 pounds per motor home
Number of motor homes produced per hour = 3

Increase in PTE for VOC =

3 motor homes / hour * 38.5 pounds of VOC / motor home * 8760 hours / year * 1 ton / 2000 pounds

= 506 tons per year

The Permittee has agreed to stay a synthetic minor with annual VOC usage limited to below 250 tons per year for PSD purposes.

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	-
PM-10	-
SO_2	-
VOC	506
CO	-
NO_x	-

Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(f)(2), *" ... a modification that is*

subject 326 IAC 8-1-6..".

County Attainment Status

The source is located in Adams County.

Pollutant	Status **(attainment, maintenance attainment, or unclassifiable; severe, moderate, or marginal nonattainment)**
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. Adams County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Adams County has been classified as attainment or unclassifiable for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	less than 100
PM-10	less than 100
SO_2	less than 100
VOC	less than 250
CO	less than 100
NOx	less than 100

(a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.

(b) These emissions are based upon details in the Technical Support Document for the Part 70 operating permit T001-7465-00028 issued on December 17,1998.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	HAPs
Existing plant	less than 100	less than 100	less than 100	less than 250	less than 100	less than 100	
After Modification	less than 100	less than 100	less than 100	less than 250	less than 100	less than 100	

(a) This modification to an existing minor stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

(b) The VOC emissions are limited to less than 250 tons/yr, therefore, 326 IAC 2-2 PSD requirements do not apply.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

(b) There are no new National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this proposed modification.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)

Pursuant to CP 01-11-93-0137, issued on December 1, 1989, this facility shall use less than 250 tons of VOC, including coatings, dilution solvents, and cleaning solvents, per 12 consecutive month period. This usage limit is required to limit the potential to emit of VOC to less than 250 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

To implement this requirement, a new condition D.1.2 is added to the section D.1 of the Part 70 Permit T001-7465-00025. The succeeding conditions are re-numbered accordingly. References to the condition D.1.2 are added in the monitoring and reporting conditions of the section D.1

State Rule Applicability - Individual Facilities

326 IAC 8-1-6 (General provisions relating to VOC rules: general reduction requirements for new facilities)

The potential VOC emissions from the motor home graphics stripping and logo painting operation, the adhesive application and finish coating operation and the front cap, rear cap and skirt painting operation are more than 25 tons per year and therefore are subject to provision of this rule.

A summary of the BACT review submitted by the company is as follows:

The Permittee compared the BACT at three similar sources (the other two were determined by the OAQ), in accordance with USEPA's draft "Top Down: BACT Guidance" dated March 15, 2000.

The "BACT Analysis" submitted by Fleetwood Motor Homes of Indiana, #44 was based on the Draft "Top Down Approach: BACT Guidance" by USEPA, Office of Air Quality Planning Standards, March 15, 1990. The analysis includes the use of the following:

(a) BACT/RACT/LAER Information System; USEPA, BACT/RACT/LAER Clearinghouse 1990;
(b) Compilation of Control Technology: USEPA, BACT/RACT/LAER Clearinghouse 1990;
(c) EPA, State, and Local Air Quality Permits and Applications;
(d) Federal, State and Local Permit Engineers; and
(e) Vendors/Suppliers.

Fleetwood Motor Homes of Indiana, #44 evaluated control technologies selected as BACT for the following motor home manufacturing plants:

(1) Coachmen Vans, Elkhart, Indiana
(2) Monaco Coach Corporation, Coburg, Oregon
(3) Fleetwood Motor Homes, Decatur, Indiana
(4) Monaco Coach Corporation, Wakarusa, Indiana
(5) A.R.E. Truck Caps, Ohio was not included in this BACT assessment because EPA does not consider controls employed by this source to be BACT as they were carried out under supplemental environmental project (information as provided by P&G section of OAQ).

The Permittee had submitted following BACT determination from these sources:

Source	Affected Facility	BACT Determination	Reference
Coachmen Vans, Elkhart, Indiana	Conversion Van Process and Surface Coating Operations	1. The total amount of volatile organic compounds delivered to the applicators does not exceed 48 tons per year, calculated on a 12 month rolling total. During the first 12 months of operation, VOC usage shall be limited such that total VOC used, including clean up solvents, divided by months of operation shall not exceed an average of 4 tons per month. 2. The following pollution prevention techniques are applied: • The cleanup solvents shall be stored in closed containers with soft gasket spring loaded closures, • The cleanup rags saturated with solvent are stored, transported, and disposed of in containers that are closed tightly, • The spray guns used are the type that can be cleaned without the need for spraying the solvent into the air.	RBLC Clearing house, IDEM
Monaco Coach Corporation, Coburg, Oregon	Class A Motor Homes	# Miscellaneous Caulk, Adhesive and Sealant application: Non-aerosol materials applied with hydraulic pressure or airless systems. VOC content limits for each material. # Cleaning and prepping motor home exteriors prior to surface coating: hand wipe exteriors with a cleaning solvents. Primer applied with HVLP equipment. VOC content limits for each material. # Base coat and clear application: HVLP spray equipment. VOC content limits for each material. # Chassis painting: utilize low VOC coatings and electrostatic spray technology or an ultra-low VOC coating and high transfer efficiency, HVLP equipment. # Production line paint repairs: Air atomizing spray equipment. VOC content limits for material. # Undercoating: Waterborne, low VOC material, applied with airless spray equipment.	RBLC Clearing house, IDEM
Fleetwood Motor Homes, Decatur, Indiana	Surface Coating Motor Homes	The specification of enforceable operating conditions within the permit to operate which will limit emissions of VOCs to less than 250 tons per year. This action would comply with the general provisions of 326 IAC 8-1-6. BACT was also the use of air atomization spray application.	RBLC Clearing house, IDEM

Source	Affected Facility	BACT Determination	Reference
Monaco Coach Corporation, Elkhart, Indiana	Surface Coating Motor Homes	Miscellaneous cleaning, touch-up and sealing processes - Hand-wipe application will be used whenever possible. Aerosol containers are provided for some materials which result in airless spray application. Some materials are supplied in tubes, resulting in direct application of the material. Cleaning motor home exteriors prior to painting - Motor home exteriors will be hand-wiped with cleaning solvent. Application of primer, base, top, and clear coatings in the main production booths -Application of primer, base, top and clear coats will be done with high volume-low pressure (HVLP) spray equipment. The base coat that will be used is as high in solids as available for base coats at present. Application of coatings in the paint repair booths - To obtain acceptable finishes, air atomized spray equipment will be used for parts painting and paint repairs. Sealant and Caulks - Coaches will be prepped with aerosol cleaners and hand-wiped solvents. Caulks and sealants will be applied with hydraulic pressure or airless systems. Undercoating - Vehicles will be undercoated with a waterborne-low VOC undercoating. Housekeeping - Good housekeeping practices will be employed to minimize leaks, spills and evaporative losses. These will include: (a) keeping containers sealed when not in use or during storage (b) purging gun and line cleaning solvents into approved containers (c) avoiding drips and spills and cleaning up spills immediately (d) maintaining spray equipment and pumps to avoid drips and seal leaks Recycling - Collected solvents will be recycled on-site and off-site to recover reusable solvents and minimize waste. Resin Patching - End-up seams on the coach will be filled with a hand-lay up resin and gel coat.	

The company has determined the following options to be technically feasible:

(1) Pollution Prevention Techniques: This will include storing solvent and solvent soaked rags

in closed containers.

(2) Low VOC materials: Use of materials with lowest VOC content possible, while still maintaining product quality.

(3) Air Atomization Spray application: Use air atomization spray application in the surface coating booths.

(4) VOC usage limit: The VOC usage per motor home shall be limited to dependent upon size of motor home being produced as following:

Motor home type	Motor home length (feet)	pounds of VOC per motor home (daily average)
Small	30	73
Large	45	111.5

A review of add-on control technologies with respect to BACT assessments from other facilities which have operations similar to the motor home painting operations at the Fleetwood Motor Homes of Indiana, #44 facility was carried out. The Permittee also re-evaluated the BACT determination made in 1988 construction permit issued to this source.

Following options were considered for add-on control technologies:

1. *Carbon Adsorption* - There are several process and waste stream related factors which adversely affect the use of carbon adsorption for VOC control. The control efficiency is questionable for multiple solvents present at low concentrations as they are in the overall process and it is impractical to recover these solvents from multi component and two-phase mixtures. Carbon Adsorption has an inadequate capacity for methanol and possibly other solvent components which require large carbon beds and/or frequent regenerations because they are not readily adsorbed at low concentrations. There are also safety hazards associated with ketones and other solvents such as fire and explosion. The system would require steam supply for regeneration and create wastewater containing soluble organics as a result.

2. *Thermal Incineration* - Of all the VOC control technologies evaluated, thermal incineration is the one whose VOC reduction efficiency is least affected by waste stream characteristics. The combustion of halogenated organics, however, will result in HCl emissions unless removed by a caustic scrubber. Due to the intermittent nature of the operation and low heating value of the waste stream, high fuel consumption is required and will result in additionally NO_x and CO emissions to the environment.

3. *Catalytic Incineration* - Although catalytic incinerators can be used for the destruction of most solvents present in complex mixtures, they are not suitable for treatment of wastes streams containing halogenated organics.

4. *Zeolite Absorption* - Similar to carbon adsorption, Zeolite material is used to absorb VOC compounds entrained in the exhaust air stream. This system has same limitations as the Carbon adsorption system discussed above.

The Permittee had evaluated Carbon Adsorption, Catalytic Incineration and Thermal Incineration as technically feasible options in the earlier BACT determination. No new BACT determination regarding additional add-on control technologies being technically feasible were observed in other similar sources manufacturing motor homes.

For the add-on controls to be feasible, low exhaust air-flow and high level of emissions will enure adequate VOC concentration in the exhaust stream. Typically motor home manufacturing operations have large air flow volumes and have very low VOC emission concentration. At these concentrations the fuel value of the emissions are negligible. As a result additional fuel combustion will be required to operate most of these controls. Additionally the duct-work and

capture system required to handle the large air-flow makes the cost of control system nearly as much as the cost of the original plant (observation made in the technical support document for Monaco Coach Corporation's construction permit 039-8662-00017).

Therefore, the technical feasibility analysis from the previous BACT determination was reviewed further for economic feasibility.

The Permittee converted the cost figures for these control technologies from the 1988 permit to the present (2001) costs using the following equation:

Year 2001 $ cost = Year 1998 cost X (1+ Annual inflation rate)$^{(\text{number of years})}$

Number of years elapsed is 12 and annual inflation rate was assumed to be 3%.

The 1988 costs for add-on control technologies for this Source as revised for 2001 are shown in the following table:

Control Technology	Carbon Adsorption			Catalytic Incineration			Thermal Incineration		
Design Option	Option 1	Option 2	Option 3	Option 1	Option 2	Option 3	Option 1	Option 2	Option 3
Total Annualized $ cost: (1988 dollars based on BACT submission for CP 01-11-93-0137)	2,252,812	1,822,113	1,459,346	3,628,264	3,088,321	2,618,700	3,405,533	3,050,508	2,756,891
VOC removed in tons per year (1988 BACT submission)	207	207	207	211	211	211	211	211	211
$ per ton VOC removed based on 1988 dollars	10,881	8,801	7,048	17,170	14,615	12,392	16,116	14,436	13,046
Total Annualized $ cost: (1988 dollars based on BACT submission for CP 01-11-93-0137)	3,211,971	2,597,897	2,080,678	5,173,037	4,403,207	3,733,640	4,855,476	4,349,295	3,930,667
VOC removed in tons per year (1988 BACT submission)	241.5	241.5	241.5	246.5	246.5	246.5	246.5	246.5	246.5
$ per ton VOC removed based on 1988 dollars	13,300	10,757	8,615	20,985	17,862	15,146	19,697	17,644	15,945

As the total VOC emissions from the entire plant are limited to less than 250 tons per year, therefore assuming a destruction efficiency of 97% for Carbon adsorption and 99% for catalytic and thermal incineration, the VOC removal is at 241.5 and 246.5 tons per year respectively.

The option 1, option 2 and option 3 are three alternative scenarios where option 1 represents different control devices used for different exhaust streams and option 3 represents single control device for all exhaust streams. The cost for installing add-on controls are prohibitive for this operation.

Therefore, based on above discussion the BACT determination carried out by the company is acceptable to the OAQ, IDEM. Thus, pursuant to 326 IAC 8-1-6, the graphics stripping and logo painting operation, the adhesive application and finish coating operation and the front cap, rear cap and skirt painting operation shall reduce VOC emissions using Best Available Control Technology (BACT). The BACT conditions for this facility shall be as follows:

(1) The VOC usage per motor home shall be limited to dependent upon size of motor home being produced as following:

Motor home type	Motor home length (feet)	pounds of VOC per motor home (daily average)
Small	30	73
Large	45	111.5

(2) Use of air atomization spray application.
(3) Utilization of low VOC coatings.
(4) Implementation of pollution prevention techniques, including but not limited to storing solvent and solvent soaked rags in closed containers.

These new BACT conditions replace condition D.1.1 on page 28 of 40 of the Part 70 Permit T001-7465-00025.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

Conclusion

This proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 001-12077-00025.